Maryland Building Energy Transition Implementation Task Force

Cost of Decarbonization Summary and Key Takeaways

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- AECOM Overview & Support
- LBNL Covered Buildings Summary
- Rewiring America Residential Buildings Summary

AECOM Overview

Who are we?

A technical advisor with a deep bench of energy and decarbonization expertise.

Why are we here?

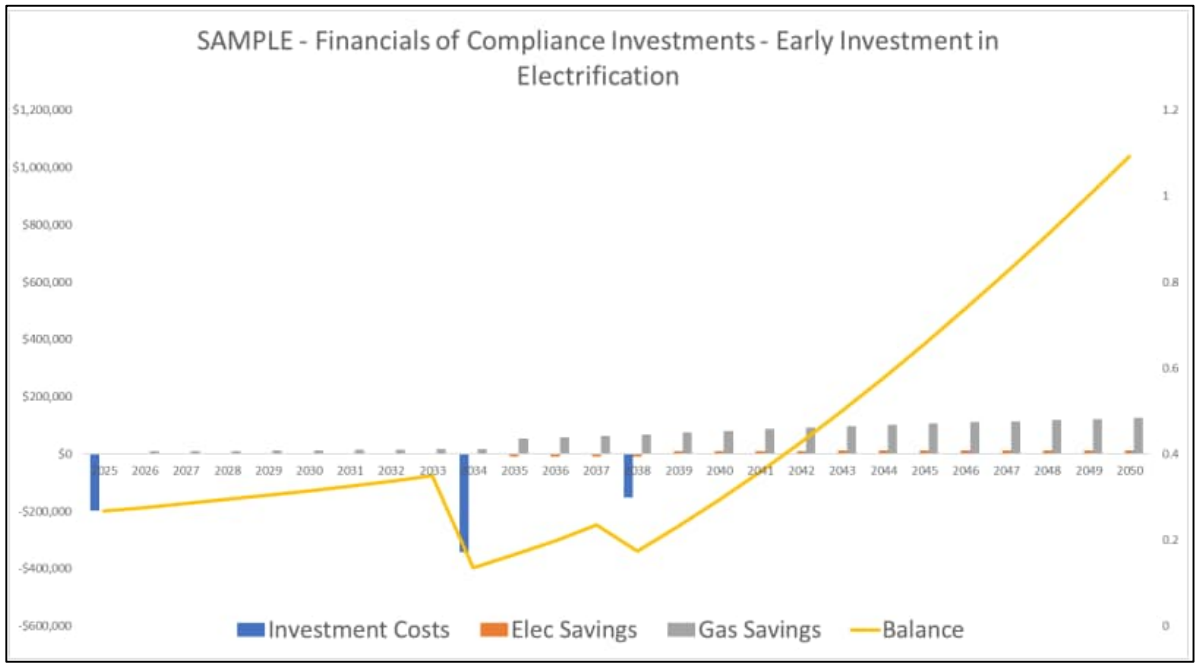
To provide data driven policy and funding analysis where strategically needed.

How can we help the Task Force?

With data driven analyses that guide the development of Task Force recommendations.

BEPS Covered Building Decarbonization: Summary

Early investments in electrification and energy efficiency will pay large dividends in future electric and gas savings



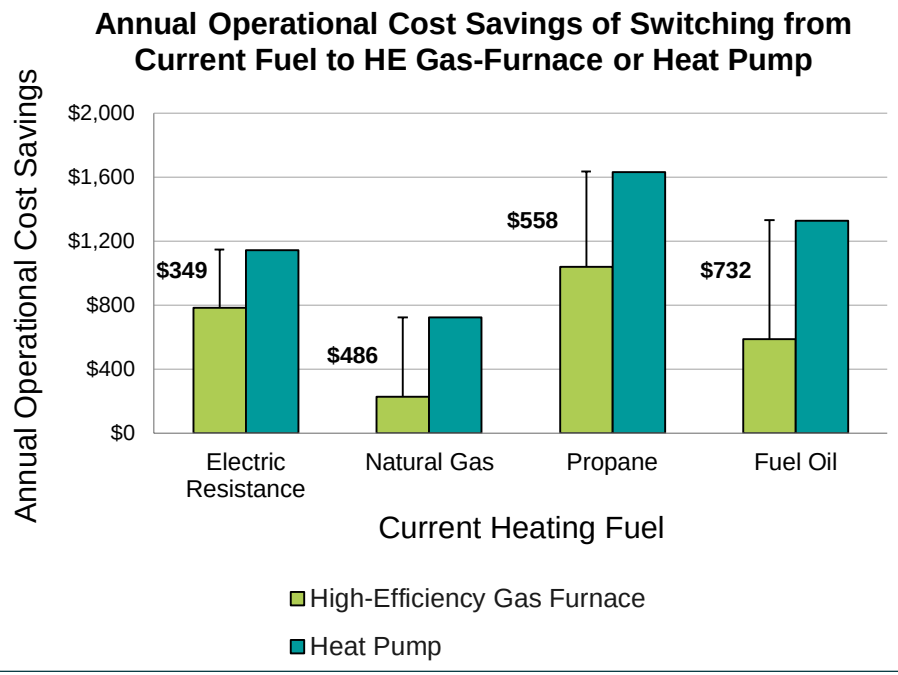
Costs and Savings of Investments in Energy Efficiency and Electrification	
Total Electrification Investments:	$6.4B
Total Efficiency Investments:	$8.8B
Net Cost Savings of All Investments by 2050:	$4.5B
Net Cost Savings of All Investments by 2050:	$4.5/SF

BEPS Covered Building Decarbonization: Key Takeaways

$15.2B	• The projected cost for electrification and efficiency investments to decarbonize comes out to $15.2B from 2025 – 2040.
$1B/year	• The annualized projected cost of decarbonizing all covered buildings is $1B per year
$1/SF/year	• On average, the capital cost to fully decarbonize for covered buildings is $1/SF/yr
50%	• Roughly 50% of covered buildings are financeable.

Residential Building Decarbonization: Summary

Incentives for fossil fuel upgrades make HE Gas Furnaces more affordable than Heat Pumps. However, the operational cost of Heat Pumps is lower than that of HE Gas Furnaces.



HVAC Electrification Pay Back Period with Current Incentives

AMI = Area Median Income

****Current funding covers only a portion of households***

< 80% AMI, No Upfront Cost	511,381 Households	**Instant Savings**
< 80% AMI	18,644 Households	**0 - 4 Years**
80 - 150% AMI	649,638 Households	**Instant Savings**
> 150% AMI	469,008 Households	**12 – 35 Years**

**Note:*

- *Low income households qualify for MEA, DHCD and IRA Rebates.*
- *Middle Income households qualify for IRA Rebates.*
- *High income households qualify for IRA Tax credits.*

Residential Building Decarbonization: Key Takeaways

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$26B	• Total upfront cost to cover upgrading every house to electric heat pump from 2025 – 2045
$1.3B/year	• The projected cost of covering the upfront cost for every MD household to upgrade to an efficient heat pump is $1.3B per year
$13/SF/year	• On average, the capital cost to fully decarbonize HVAC of residential buildings is $13/SF/yr
98%	• 98% of households will have lower energy costs by upgrading to a heat pump than to a high efficiency gas furnace over 20 years

Thank You